US Army Corps of Engineers®

R&D Program: TOWNS

Work Unit: Helicopter-based Emergency Computer Systems for Reconnaissance Efforts During Flood Fighting

Needs & Problems Addressed:

- Difficult to update real-time information in GIS
- Emergency management personnel need real-time information to make critical decisions
- Safety issues for field personnel can limit land access

Objectives:

- Develop a computer-based system for real-time helicopter-based capturing of information during floods
- Communicate information back to field offices and input directly into GIS systems

Remnants of sand boils visible from helico

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Work Unit Funding Profile:

FY03	FY04	FY05	Total
$ 50k	$ 90k	$ 0 k	$ 140k

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Business Program/Missions Areas Supported:

- Inland Navigation __ %
- Coastal Navigation __ %
- Coastal Storm Damage Reduction 20 %
- Inland Flood Control/Damage Reduction 40 %
- Environmental Protection & Quality ___ %
- Multi-Purpose (Hydropower, Rec & Water Supply) __ %
- Emergency Management 40 %
- Regulatory __ %
- Support for Others___ %

(Must to add to 100%) Total: 100 %

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CW Strategic Goals Check List: (check if applies)

- Provide sustainable water resources development & mgmt ___
- Restore past environment degradation ___
- Provide project services of high quality _X_
- Reduce losses from natural & manmade hazards _X_
- Supports being a world class technical leader _X_
- Addresses strategic or system needs in a framework or integrated approach by developing:
  - Methods or decision support tools _X_
  - Technology to improve life cycle productivity ___
  - Technology to monitor systems, provide feedback and develop operating guidance ___

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Which “short term” field needs does this support:

- Improves efficiencies in emergency operations
- Expedites decision-making during emergencies
- Increases public safety through rapid transmission of emergency operations information

Field Review Group Relative Ranking:

- FRG planned for 21-22 AUG 02

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Listening Sessions Check List: (check if applies)

- Improves data sharing/exchange with the public in these areas:
  - Provides one stop shop for maps & data for basin wide planning ___
  - Provides data to make informed decisions _**X**_
  - Provides a system for basin wide planning ___
  - Provides information about what is happening at Corps facilities _**X**_ (up to date web sites)
- Tech Transfer plan to include educating the public _**X**_
- Coordinate research, models, analysis with regulatory agencies to insure results will be accepted ___
- Develop R&D products:
  - For watershed management plans, not just at the project level ___
  - To include aesthetics as components of all projects ___
- Create better models for ground & surface water ___

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Products:

- Emergency computer system for reconnaissance efforts during flood fighting
- Detailed pictures, quality descriptions, and precise locations than allow emergency management to make informed decisions
- PDA-based software to summariz engineering measurements
- Hardware interface
- Software for database integratio and real-time data

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Benefits

- Direct:
  - Real-time gathering of large volumes of high-quality and accurate information from the field
  - Potentially significant ROI
- Indirect:
  - Minimize property and life losses
  - Enhances emergency operations capabilities

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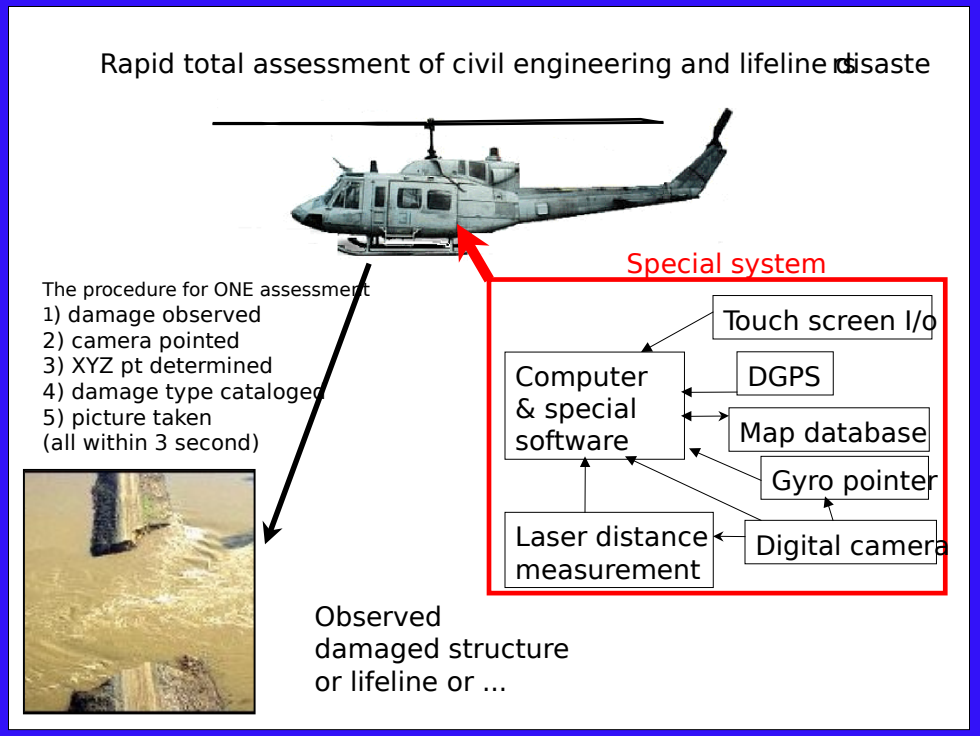
Technology Transfer Plan:

- Software available on TOWNS website
- Documentation of reconnaissance systems
- Inclusion in Corps training for emergency operation personnel
- Coordinate with EngLink



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Why should the Corps fund this R&D, instead of private industry and/or others:

- Specific links to Corps Emergency Operations make it unlikely that market will be large enough for private sector to develop

What is Impact if not started:

- Less rapid transmission of essential data results in less effective emergency operations